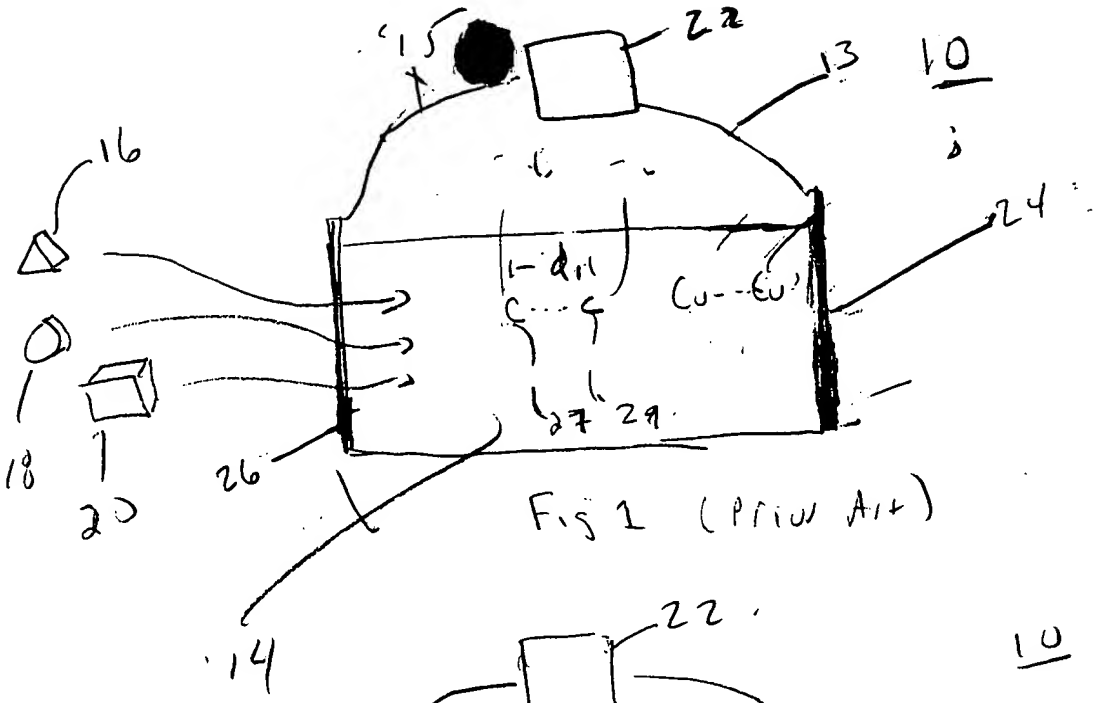


Fig 1 (Prior Art)

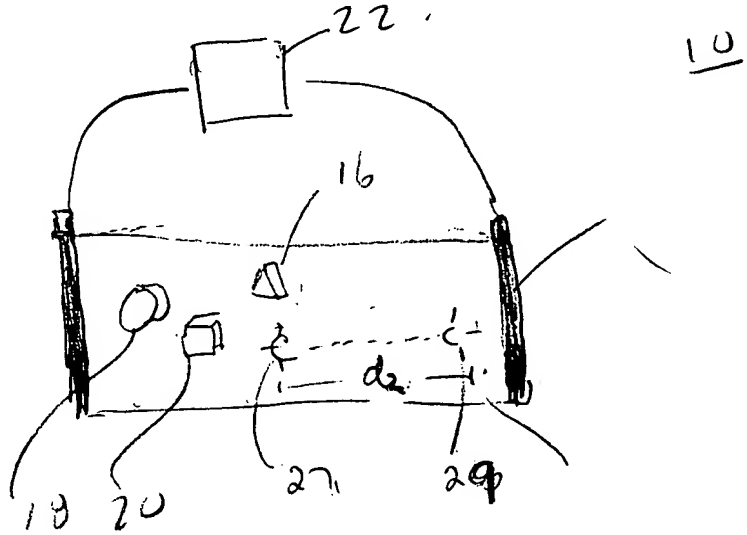


Fig 2 (Prior Art)

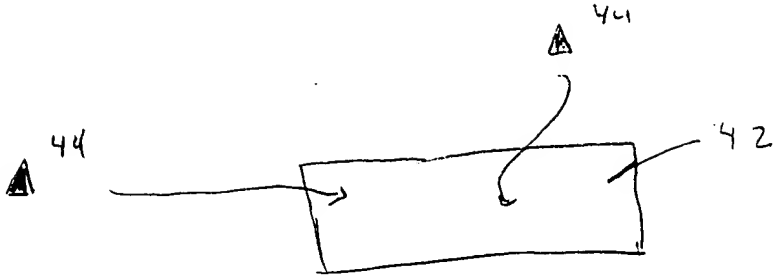


FIG 3A (PRIOR ART)

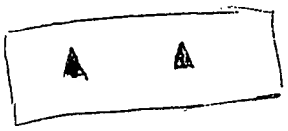


FIG 3B (PRIOR ART)

FIG 3C (PRIOR ART)

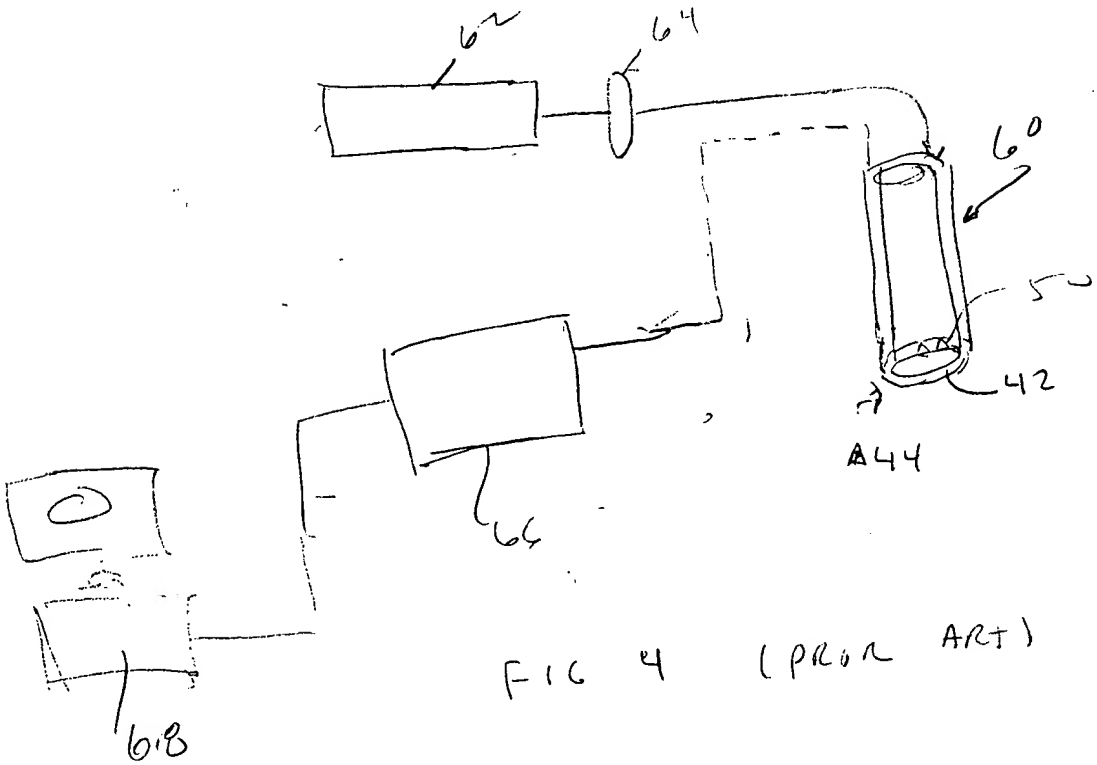


FIG 4 (PRIOR ART)

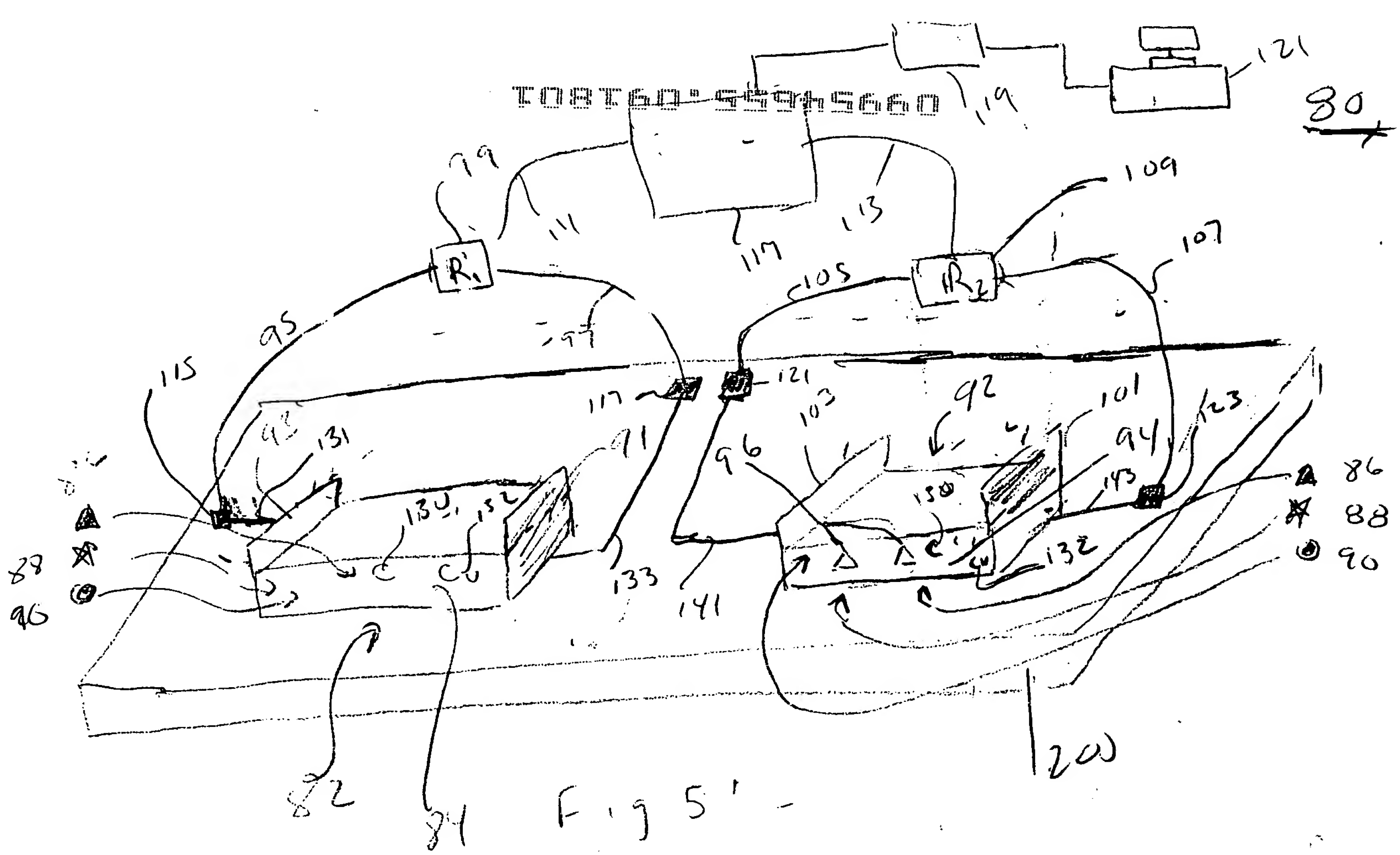
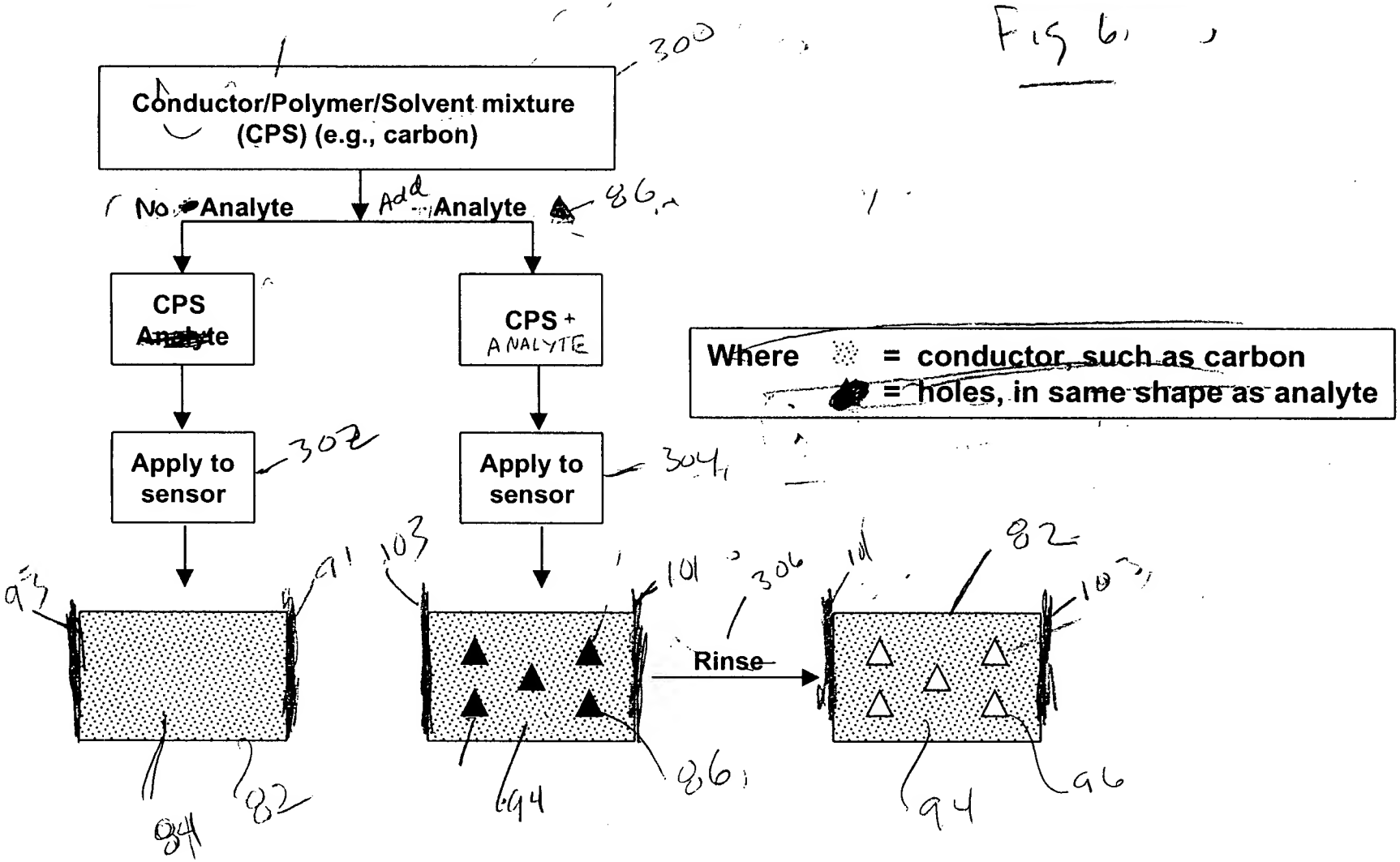

80
121
119
117
113
111
109
107
105
99
97
95
115
117
121
103
92
101
94
123
143
96
93
131
130
132
150
132
133
141
86
88
90
88
90
82
84
200

Fig 5'

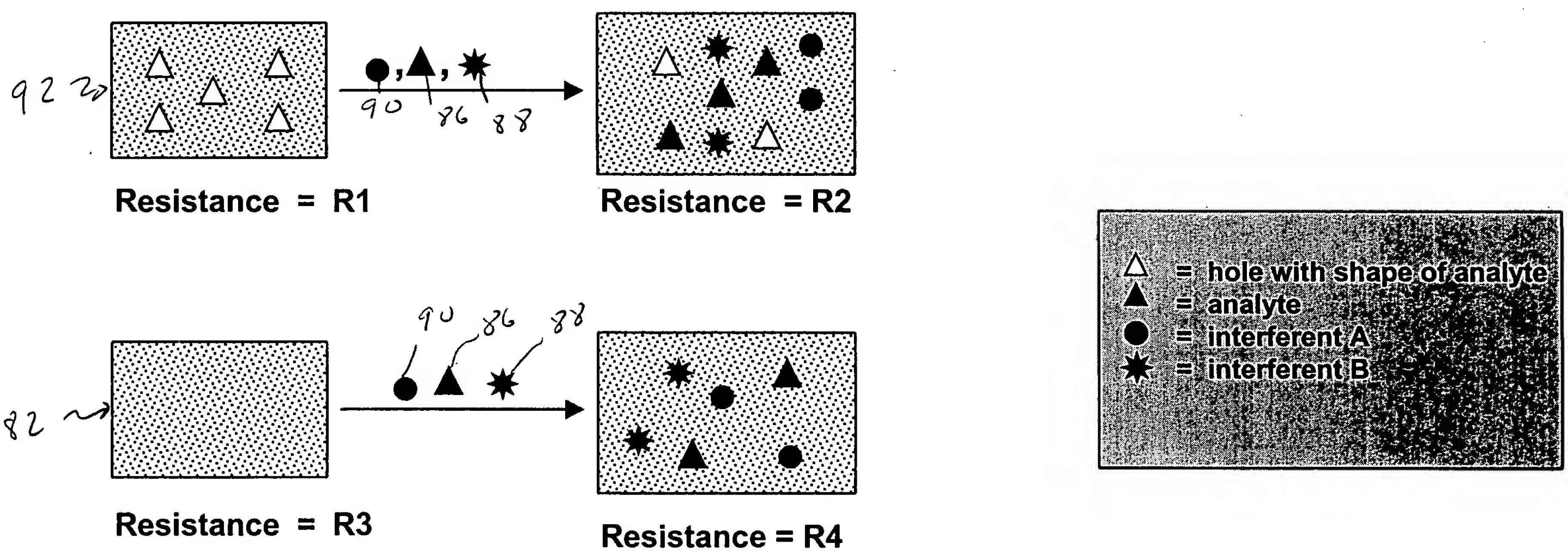
Flowchart for Molecular Recognition Paired Sensors Fabrication

Fig 6



Resistive Detection Exposure of Molecular Recognition Paired Sensors

1) Add mixture (gas or liquid) containing analyte plus interferents to resistance detector



2) Measure R1, R2, R3, R4. At low concentrations of analyte of interest Δ analyte is aborbed into cavities and does not contribute to resistance. Resistance only increases if there are no cavities, and this absorbed chemical leads to resistance increase. See sheet of equations.

3) Calculate R▲ resistance change due to analyte of interest from R1, R2, R3, R4

#*

Draper Laboratory Proprietary

J. Williams - 1-18-01 Modified C. E. Dubé 2/19/01;4/16/01

Fig 7

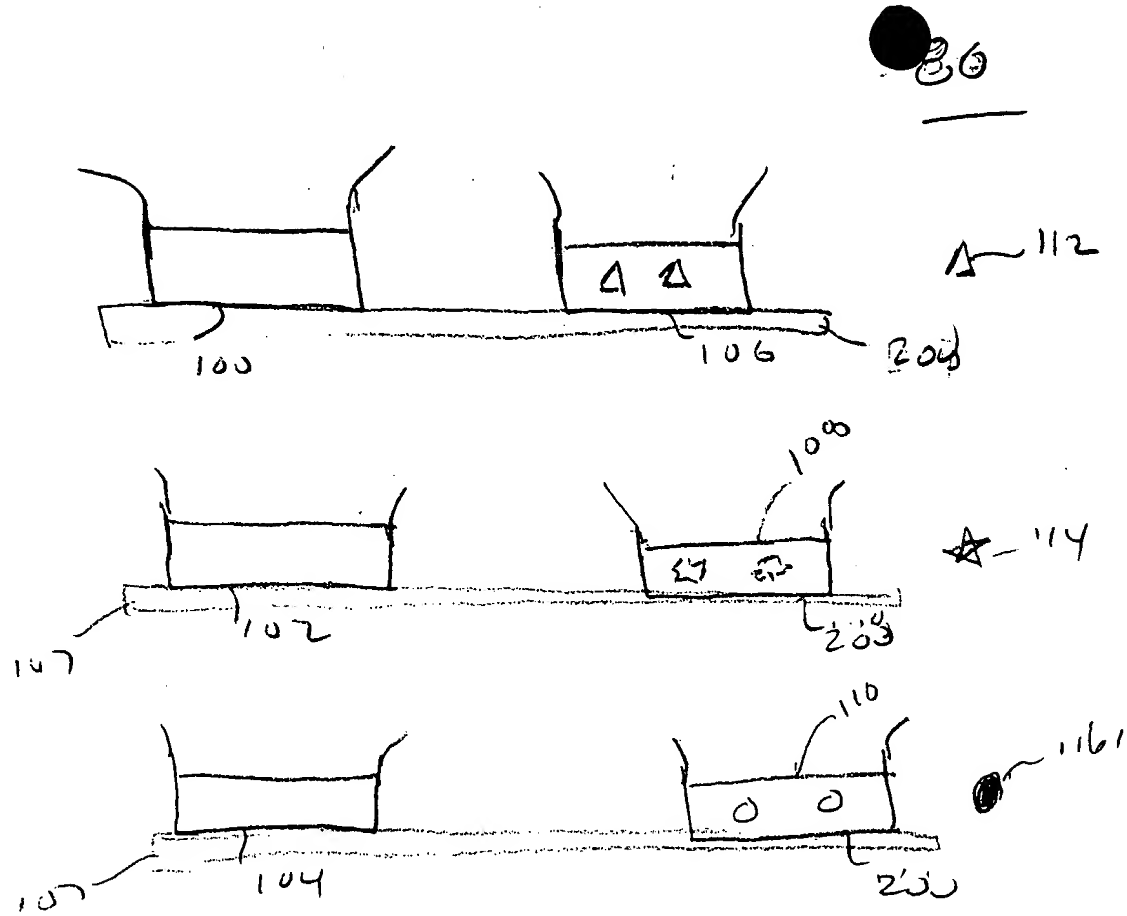


Fig. 8

T08T60"55945660

Resistive Network for Exposure of Molecular Recognition Sensors

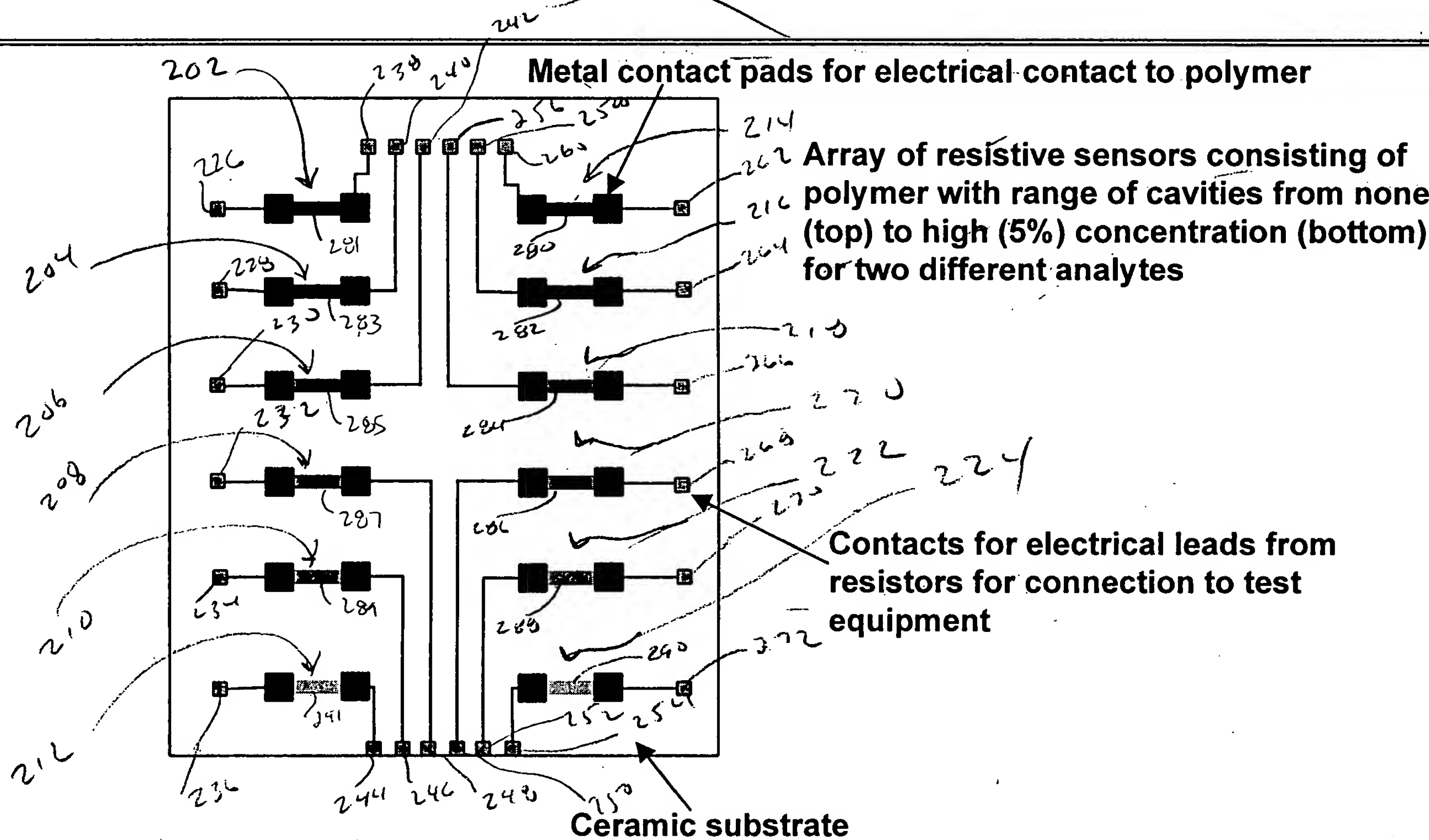


Fig. 9

#*

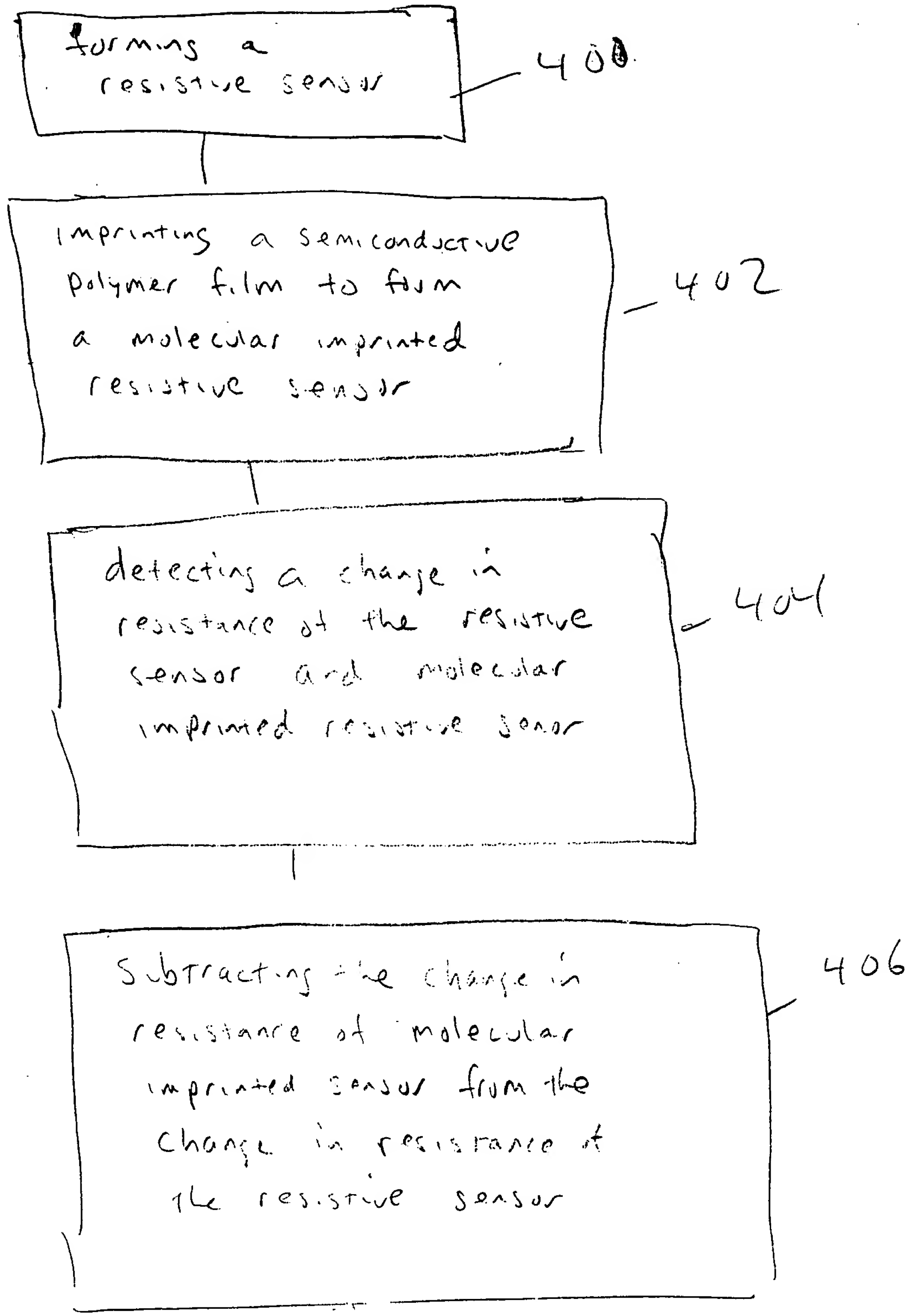

forming a resistive sensor
400
Imprinting a semiconductive polymer film to form a molecular imprinted resistive sensor
402
detecting a change in resistance of the resistive sensor and molecular imprinted resistive sensor
404
Subtracting the change in resistance of molecular imprinted sensor from the change in resistance of the resistive sensor
406

Fig 10